IN THE CLAIMS:

Please cancel claims 7-15 without prejudice, and amend the claims as follows:

1. (Original) A process for producing a polyurethane foam comprising the steps of:

a) providing an organic polyol having a molecular weight in the range of 2000 to 7000, wherein said polyol has a level of unsaturation of between 0.001 and 0.030 meq./gram;

b) providing an organic isocyanate;

c) providing a blowing agent;

d) providing a reactive catalyst;

e) mixing said polyol, said isocyanate, and said blowing agent in the presence of

said catalyst,

so as to produce a polyurethane foam.

2. (Original) A process according to claim 1 wherein said reactive catalyst comprises one or more catalysts selected from the group consisting of: (2-(2-(2-dimethylaminoethoxy-)ethyl methyl amino-)ethanol); (bis-(3-dimethylaminopropyl)-imino-propan-2-ol); (2-propanol, (1,1'-((3-(dimethylamino)propyl)imino)bis- ; and (tetramethyliminobispropylamine).

3. (Original) A process according to claim 1 wherein said isocyanate is an organic di-isocyanate.

4. (Currently Amended) A process according to claim 3 wherein said organic di-isocyanate is selected from the group consisting of[[:]] toluene diisocyanate, diphenylmethane-4,4'-diisocyanate, polymerized isocyanates; aliphatic polyisocyanates; alicyclic polyisocyanates; pre-polymers with end isocyanate groups ~~such as toluenediisocyanate pre-polymer, and diphenylmethane-4,4'-diisocyanate pre-polymer which are obtained by the reaction of the above-mentioned substances with a polyol~~; denatured isocyanate ~~such as carbodiimide denatured substances~~; and further mixed polyisocyanates thereof. ~~Thus, the words "organic isocyanate" as used herein includes any and all of the aforesaid isocyanates, including mixtures thereof.~~

5. (Original) A process according to claim 1 wherein said blowing agent is selected from the group consisting of: butane, pentane, halogenated hydrocarbons, carbon dioxide, acetone, and water.

6. (Original) A process according to claim 5 wherein said blowing agent comprises a halogenated hydrocarbon present in any amount between 2.0 and 30 percent by weight of the total polyol used in making said polyurethane foam.

Claims 7-15 (Cancelled)

16. (New) A process according to claim 4 wherein said pre-polymers with end isocyanate groups are selected from the group consisting of toluenediisocyanate pre-polymer, and diphenylmethane-4,4'-diisocyanate pre-polymer, said pre-polymers obtained by reacting a corresponding isocyanate with a polyol.

17. (New) A process according to claim 4 wherein said denatured isocyanate is a carbodiimide denatured substance.

18. (New) A method comprising:

reacting an organic polyisocyanate and a polyol in the presence of a reactive amine catalyst composition, the organic polyol having a molecular weight in the range of 2000 to 7000 and a level of unsaturation of between 0.001 and 0.030 meq/gram and the reactive amine catalyst composition including at least one amine catalyst that is capable of being consumed by chemical reaction during the formation of a foam; and

forming a molded flexible polyurethane foam that has a carbon emission of 0.1 or less per gram of foam.

19. (New) The method of claim 18 further including testing the carbon emission of said molded flexible polyurethane foam by sealing one gram of finished foam in a 22 milliliter glass container and heating to 120 °C for 300 minutes before sampling one milliliter of the headspace from said glass container for analysis by gas chromatography.

20. (New) The method of claim 18 wherein reacting an organic polyisocyanate and a polyol in the presence of a reactive amine catalyst composition includes reacting said organic polyisocyanate and said polyol in the presence of a reactive amine catalyst composition that includes a blend of reactive catalysts.

21. (New) The method of claim 20 wherein reacting an organic polyisocyanate and a polyol in the presence of a blend of reactive catalysts includes reacting said organic polyisocyanate and said polyol in the presence of a blend of (2-(2-(2-dimethylaminoethoxy-)ethyl methyl amino-)ethanol) and (bis-(3-dimethylaminopropyl)-imino-propan-2-ol).

22. (New) The method of claim 18 wherein reacting an organic polyisocyanate and a polyol in the presence of a reactive amine catalyst composition includes reacting in the presence of a reactive amine catalyst composition in an amount of 0.02 to 10 parts by weight based on 100 parts of said polyol.

23. (New) The method of claim 18 wherein forming a molded flexible polyurethane foam includes forming a molded flexible polyurethane foam having a core density of 44 to 45 kg/cm^3.

24. (New) The method of claim 18 wherein forming a molded flexible polyurethane foam includes forming a molded flexible polyurethane foam that recovers at least 90 % of its original height if compressed according to the ASTM 3574 standard.

25. (New) A method comprising:

reacting an organic polyisocyanate and a polyol in the presence of a reactive amine catalyst composition, the organic polyol having a molecular weight in the range of 2000 to 7000 and a level of unsaturation of between 0.005 and 0.025 meq/gram and the reactive amine catalyst composition including at least one amine catalyst that is capable of being consumed by chemical reaction during the formation of a foam; and

forming a molded flexible polyurethane foam that recovers at least 90 % of its original height when compressed 50 % according to the ASTM 3575 standard.

26. (New) The method of claim 25 wherein forming a molded flexible polyurethane foam includes forming a molded flexible polyurethane foam that recovers at least 80 % of its original height when compressed 50 % of its original height for 22 hours at 49 °C and 100 % relative humidity.

27. (New) The method of claim 25 wherein forming a molded flexible polyurethane foam includes forming a molded flexible polyurethane foam that has a carbon emission of 0.1 or less per gram of foam.

28. (New) The method of claim 25 wherein reacting an organic polyisocyanate and a polyol in the presence of a reactive amine catalyst composition includes reacting said organic polyisocyanate and said polyol in the presence of a blend of (2-(2-(2-dimethylaminoethoxy-)ethyl methyl amino-)ethanol) and (bis-(3-dimethylaminopropyl)-imino-propan-2-ol).

29. (New) The method of claim 28 wherein reacting an organic polyisocyanate and a polyol in the presence of a reactive amine catalyst composition includes reacting an organic polyisocyanate comprising 90 % by weight of total isocyanate toluene diisocyanate and 10 % by weight of total isocyanate polymeric diphenylmethane diisocyanate with said polyol.